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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,774	08/03/2001	Ryuichi Toyoda	33849	8732

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EXAMINER

ELAHEE, MD S

ART UNIT	PAPER NUMBER
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2645

10

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/921,774

Applicant(s)

TOYODA ET AL.

Examiner

Md S Elahee

Art Unit

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05 and 09</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 6 and 8 are objected to because of the following informalities: regarding claims 6 and 8, the phrase "said hinges" on page 20, line 3 and 4 appears to be the phrase "said hinge". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5-12 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Harms (U.S. Patent No. 5,732,331).

Regarding claim 1, Harms teaches a housing (i.e., first box member) including a speaker (i.e., receiver) (fig. 1, number 12; col.3, lines 1-7).

Harms further teaches a flip portion (i.e., second box member) including a microphone 26 (i.e., transmitter) (fig. 1, number 14; col.3, lines 1-7).

Harms further teaches that the housing and the flip portion are rotated relative to each other at a hinge 30 for folding the mobile terminal (i.e., portable cellular phone) (fig.1, fig.3, fig.4; col.3, lines 8-25).

Harms further teaches parts other than those made of metal are employed inherently as external parts for the housing and the flip portion (fig. 1, fig.3, fig.4; col.3, lines 8-25).

Harms further teaches chassis respectively made of a metal part (fig.4, numbers 72, 64 and 66) and including an integrally formed hinge constitute skeletons of the housing and the flip portion (fig.4; col.4, lines 26-34).

Regarding claim 3, Harms teaches that the chassis supports a substrate on which electric parts are mounted (col.3, lines 58-66).

Regarding claim 5, Harms teaches that the chassis is used as an antenna ground plate, and a hole formed in the antenna ground plate is used to mount an antenna on a substrate (col.3, lines 66, 67, col.4, lines 1, 2).

Regarding claim 6, Harms teaches that an electrical coupler mechanism 32 (i.e., unit connector) is provided between portions of the hinges of the chassis in order to electrically connect the housing and the flip portion (col.3, lines 8-15).

Regarding claim 7, Harms teaches that a unit connector includes a flexible substrate and a wire 76 (i.e., coaxial cable) (fig.4; col.3, lines 8-15, col.4, lines 18-34).

Regarding claim 8, Harms teaches that hinge walls (i.e., covers) made of the same material as the external parts are provided with the housing and the flip portion in order to cover the hinges (fig.4; col.3, lines 35-40).

Regarding claim 9 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Harms teaches that at least one hinge of the housing and the flip portion includes a reinforcing part that is stronger than external parts and that reinforces the external parts (col.3, lines 16-57).

Regarding claim 10, Harms teaches that the external parts are at least one of an upper cover of the housing (i.e., first box member) and a lower cover of the flip portion (i.e., second box member) (fig.4; col.3, lines 58-66).

Harms further teaches that the reinforcing parts are an end walls (fig.4, number 50) (i.e., upper hinge frame) and a rod 36 (fig.4, number 14) (i.e., lower hinge frame), respectively including a hinge portion provided for one of the housing and the flip portion (fig.4; col.3, lines 26-34).

Regarding claim 11, Harms teaches that the upper hinge frame and the lower hinge frame are inserted into the external parts (fig.4; col.3, lines 8-15, 26-34).

Regarding claim 12, Harms teaches that the upper hinge frame and the lower hinge frame are integrally formed with a chassis that supports a substrate (fig.4-6; col.3, lines 26-34, 58-65).

Regarding claim 16, Harms teaches that one of the upper hinge frame and the lower hinge frame is fixed to the external part with a rod 36 (i.e., one of screw and a pawl) (fig.4; col.3, lines 26-34).

Regarding claim 17, Harms teaches that one of the upper hinge frame and the lower hinge frame is an independent part and is securely attached to a chassis that supports a substrate, and the chassis is fixed to the external part with a rod 36 (i.e., one of screw and a pawl) (fig.4; col.3, lines 26-34, 58-65).

Regarding claim 18, Harms teaches that only one hinged portion is formed for the upper hinge frame and for the lower hinge frame (fig.4; col.3, lines 26-34).

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 4 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms (U.S. Patent No. 5,732,331) and in view of Wu (U.S. Patent No. 6,490,438).

Regarding claim 2, Harms fails to teach "said metal part is made of one of magnesium and an aluminum alloy". Wu teaches that the metal part is made of one of magnesium and an aluminum alloy (col.2, lines 10, 11). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Harms to allow said metal part is made of one of magnesium and an aluminum alloy as taught by Wu. The motivation for the modification is to have doing so in order to provide light and strong material.

Regarding claims 4 and 13, Harms fails to teach "said chassis functions as an electromagnetic absorption member and absorbs an unwanted electromagnetic wave". Wu teaches that the chassis functions as an electromagnetic absorption member and absorbs an unwanted electromagnetic wave (col.2, lines 60-66). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Harms to allow said chassis functions as an electromagnetic absorption member and absorbs an unwanted electromagnetic wave as taught by Wu. The motivation for the modification is to have doing so in order to prevent an optimal Electromagnetic Interference (EMI).

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Regarding claim 14, Harms fails to teach "a rib is formed on said chassis in order to prevent leakage of light at a portion in which said external parts engage". Wu teaches that a conductive elastic member (i.e., rib) is formed on the chassis in order to prevent EMI (i.e., leakage of light) at a portion in which the external parts engage (col.2, lines 61-66). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Harms to allow a rib being formed on the chassis in order to prevent leakage of light at a portion in which said external parts engage as taught by Wu. The motivation for the modification is to have doing so in order to obtain Electromagnetic Interference (EMI) protection.

Regarding claim 15, Harms fails to teach "a rib is formed around said chassis to reinforce said external parts constituting said box members". Wu teaches that a conductive elastic member (i.e., rib) is formed around the chassis to reinforce the external parts constituting the box members (col.2, line 61-col.3, line 3). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Harms to allow a rib being formed around the chassis to reinforce said external parts constituting said box members as taught by Wu. The motivation for the modification is to have doing so in order to provide the less effect on the printed circuit board.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tomura et al. (US Patent No. 5,150,282) teach Electromagnetic interference shielding construction in a radio telephone and Jung (US Patent No. 5,905,796) teach Hinge mechanism for foldable electronic apparatus.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alam Elahee whose telephone number is (703) 305-4822. The examiner can normally be reached on Mon to Fri from 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (703) 305-4895. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

M. E.

MD SHAFIUL ALAM ELAHEE
April 3, 2004

Allan Hoosain
ALLAN HOOSAIN
PRIMARY EXAMINER for
Fan Tsang